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Storage of High-Moisture Grain Treated With Chemicals

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Storage Of High-Moisture Grain Treated With Chemicals—

A Bibliography [12],

Y. Pomeranz¹

Introduction

The dramatic shift from picking corn and sorghum by the ear to harvesting it with a picker-sheller or a combine is an important advance in agricultural technology. Such grain, however, is harvested at a moisture content that is too high to prevent deterioration in conventional storage. Therefore, the grain must be dried, ensiled, or treated with an effective preservative to prevent damage by micro-organisms.

Approximately 20×10^7 tons of corn is produced annually in the United States, and at least 60 percent of that corn is used as animal feed. Recent fuel shortages have prompted ongoing research to use chemical preservatives as drying alternatives. Volatile fatty acids and their salts, mainly propionic acid and mixtures of propionic and acetic acids, have been studied most extensively.

This annotated bibliography lists sources of information on the use of chemicals to preserve high-moisture grain. The references are grouped by date of publication as follows: before 1960, 1960-69, and by year from 1970 through 1979. Within each group, the citations are arranged alphabetically by author. To facilitate finding specific subjects, the sources are numbered and the numbers identify references according to the following subjects: commodity, animal species, nutritive or feeding value, effective preservation, metabolism, and general and miscellaneous (see subject index).

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¹Director, U.S. Grain Marketing Research Center, Agricultural Research Service, U.S. Department of Agriculture, 1515 College Ave., Manhattan, Kans. 66502.

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- g) *Miscellaneous* 142, 148, 155, 203, 206, 208, 210, 211, 217, 221, 225, 228, 231, 232, 235, 304, 311, 313, 325, 327, 334, 338, 425, 430, 433, 454, 458, 464, 520, 522, 532, 582, 583, 613, 637, 710, 712, 730, 737, 742, 745, 748, 815, 817, 818, 820, 902, 903, 905, 915, 917, 917a, 922, 923, 927a, 927b, 1007, 1014a, 1101, 1102, 1105, 1106, 1107, 1110, 1115, 1116.

Animal Species

- a) *Cattle* 4, 112, 130, 132, 151, 212, 214, 215, 304, 324, 337, 409, 416, 426, 446, 447, 449, 453, 461, 468, 471, 509, 513, 543, 554, 557, 580, 581, 630, 707, 717, 720, 724, 733, 740, 807, 813, 822, 831, 920, 928, 929, 931, 1004, 1008, 1014a, 1114, 1115, 1117, 1118.
- b) *Dairy Cows* 137, 141, 144, 149, 157, 212, 215, 221, 222, 303, 318, 319, 407, 415, 426, 438, 441, 472, 505, 522, 552, 607, 614, 620, 629, 713, 808, 817, 830, 927a, 1106.
- c) *Poultry* 416, 422, 445, 471, 705, 836, 913.
- d) *Sheep, Lambs* 2, 3, 101, 106, 107, 135, 139, 140, 416, 456, 471, 568, 569, 743, 1006, 1014.
- e) *Swine* 104, 114, 117, 119, 120, 124, 126, 127, 128, 138, 204, 214, 218, 220, 236, 237, 305, 307, 321, 322, 323, 332, 333, 336, 402, 408, 410, 423, 424, 429, 431, 434, 508, 525, 531, 544, 546, 547, 548, 551, 554, 563, 572, 579, 604, 635, 718, 722, 729, 821, 825, 919, 930, 1005, 1008.
- f) *General and Miscellaneous* 3, 9, 109, 118, 308, 315, 416, 914, 917a, 927a, 1103.

Nutritive Or Feeding Value

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Effectiveness In Preservation

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Metabolism

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